Pumping System Assessment Tool (PSAT)

This 1-day workshop discusses performance problems encountered in everyday pumping applications.

The workshop covers practical issues involved in field measurements of fluid and electrical data and presents the Pump System Assessment Tool (PSAT) used to assess the performance of pump systems.

PSAT is a software program developed for the U.S. Department of Energy. Its purpose is to assist users in assessing the extent of energy savings opportunities in pumping systems.

PSAT relies on field measurements of flow rate, head, and either motor power or current to perform the assessment. Using algorithms from Hydraulic Institute standards and motor performance characteristics from the MotorMaster database, PSAT quickly estimates existing pump and motor efficiency and calculates potential energy and cost savings if the system was optimized.

Instructor: ***Tom Angle, Director of Engineering and R&D for Weir Specialty Pumps in Salt Lake City. Tom has held a number of positions in Engineering in his 30 years with the company. He is involved in resolving mechanical and hydraulic issues for end users all over the US and the world. Mr. Angle serves on a number of committees in the Hydraulic Institute and has co-authored several published articles on pumps. Mr. Angle is certified by the US Department of Energy as Qualified PSAT (Pumping System Assessment Tool) Instructor***

Workshop Agenda

January 6, 2005, 7:30 am – 5:00 pm
Olpin Union Building
University of Utah Campus
East Panorama Room
Salt Lake City, Utah

Registration & Continental Breakfast

- **Motor System Asset Management**
- **Overview of Fluid Systems**
- **Fundamental Fluid Relationships**
- **Overview of Pump Performance Characteristics**
- **Affinity laws**
- **Overview of Motor Performance**
- **Overview of ASD performance**
- **Developing a system performance curve from field measurements**
- **Exercises – calculating system and pump heads; evaluating pump condition from fluid measurements**
- **Pressure, flow rate, and speed measurements**

Lunch - (Utah Power Energy Efficiency Programs Overview)

- **Electrical measurements – safety; current, voltage, power**
- **Data estimating when direct measurements are not available**
- **Distinguishing measurements and requirements**
- **Using the PSAT software**
- **Application of the PSAT software to specific examples**

Breakfast, breaks & lunch are provided

Take home materials include the PSAT software, the course workbook, other DOE Best Practices publications, and information on Utah Power energy efficiency programs and incentives.

Registration Info

Online: www.utah.edu/uees

Name:_____

Title:_____

Company:_____

Address:_____

_____

City:_____

State:_____ Zip:_____

Phone:_____

Fax:_____

Email:_____

The per-person cost of the workshop is $50 before December 24, 2004 and $75 after December 24, 2004.

Payment Methods: Cash, Check, P.O., Visa or MasterCard
Card #_____
Type_____
Exp Date_____
Signature_____
Please make checks payable to: UEES

ATTN: Janeen Bennion
UEES
1495 East 100 South, RM 136
Salt Lake City, Utah 84112
Phone: (801) 581-6348
Fax: (801) 581-5440
Email: jan.bennion@utah.edu

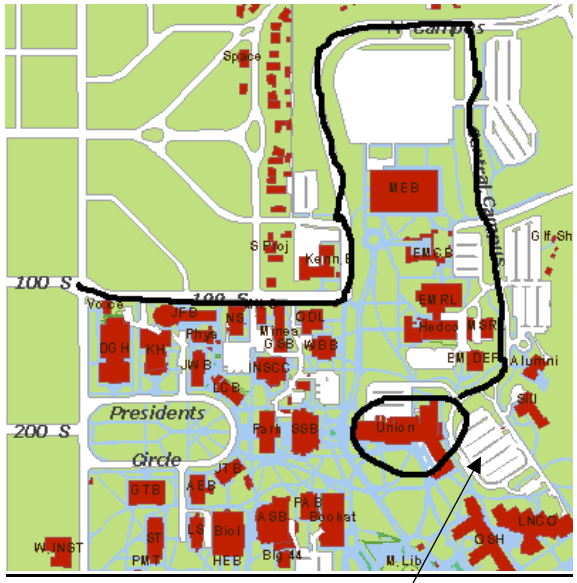
Advanced registration is required. Payment will be accepted at the door. No-Shows will be billed.

Space is limited to 30 participants!

Directions

From I-15 northbound: Take the eastbound 600 South exit. At State Street turn left, proceeding 5 blocks north until you reach 100 South. Turn right, proceeding east on 100 South for approximately 2 miles. At the University of Utah campus 100 south turns north and becomes N Campus drive. Continue north and then east on N Campus drive to Central Campus drive and turn right (south). Continue south to the Union Building visitors parking lot. Parking will be validated

From I-15 southbound: Take the eastbound 600 North exit. At 300 West turn right, proceeding approximately 1.5 miles south until you reach 100 South. Turn left, proceeding east on 100 South for approximately 2 miles. At the University of Utah campus 100 south turns north and becomes N Campus drive. Continue north and then east on N Campus drive to Central Campus drive and turn right (south). Continue south to the Union Building visitors parking lot. Parking will be validated



Park in pay lot we validate.

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Utah Energy Office

UTAH ENGINEERING EXPERIMENT STATION

UTAH Industries of the Future

Pumping System Assessment Tool (PSAT)

Utah Industries of the Future

- ✓ An overview of pump, motor, adjustable speed drive, and fluid system performance characteristics.
- ✓ Practical issues involved in field measurements of fluid and electrical data.
- ✓ Use of the PSAT software, including application to real-world situations (case studies).
- ✓ Technical and Financial Assistance Programs (Utah Power FinAnswer).

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